Medicaid Written Testimony for Tyvaso® (treprostinil) for patients with Pulmonary Hypertension with Interstitial Lung Disease

- Tyvaso was first FDA-approved in 2009 to improve exercise capacity in patients with pulmonary arterial hypertension (WHO Group 1). On March 31, 2021, Tyvaso became the first and only FDA-approved therapy in the United States for the treatment of patients with pulmonary hypertension associated with interstitial lung disease (PH-ILD; WHO Group 3) to improve exercise ability.

- Pulmonary hypertension is a frequent complication of ILD that is associated with poor prognosis, worsened functional status measured by exercise capacity, increased supplemental oxygen needs, decreased quality of life, and reduced survival.[1,2]

- Here are the results from the INCREASE clinical study that was recently published in the *New England Journal of Medicine* and serves as the basis for FDA approval of Tyvaso in patients with PH-ILD.

- INCREASE was the largest and most comprehensive completed study of adult patients with PH-ILD, with 326 patients randomized 1:1 to Tyvaso or placebo. The primary efficacy endpoint was change in six-minute walk distance (6MWD) at peak plasma Tyvaso exposure from Baseline to Week 16. At baseline participants were on average 66.5 years of age with an average 6MWD of 260 meters. The most common etiologies of PH-ILD were idiopathic interstitial pneumonia (45%) inclusive of idiopathic pulmonary fibrosis, combined pulmonary fibrosis and emphysema (25%), and WHO Group 3 connective tissue disease (22%).[3,4]

- For the primary endpoint, at Week 16, patients who received Tyvaso had a placebo-corrected difference in peak 6MWD of 21 meters using Hodges-Lehmann estimate ($p=0.004$).[4] Benefits of Tyvaso were observed across key secondary endpoints including a 42% reduction in NT-proBNP when compared to placebo ($p<0.001$) and a 39% reduction in the risk of a clinical worsening event when compared to placebo ($p=0.04$). Additionally, patients receiving Tyvaso experienced significantly fewer exacerbations of underlying lung disease; 26.4% of Tyvaso patients experienced an exacerbation compared to 38.7% of placebo patients ($p=0.02$).[3,4]

- The safety profile of Tyvaso was consistent with previous studies and most treatment-related adverse events were mild to moderate in intensity. Treatment discontinuation for any reason occurred in 24.5% of Tyvaso patients and 23.3% of placebo patients.[3]

- Given the findings of the INCREASE study, and lack of FDA-approved treatments for patients with PH-ILD, we ask that you consider making Tyvaso available as Preferred on the AHCCCS Arizona Medicaid PDL for patients with PH-ILD that depend on your services for their medications.

References:

1. Lettieri CJ, Nathan SD, Barnett SC, Ahmad S, Shorr AF. *Chest.* 2006 Mar;129(3):746-752.
2. Cottin V, Le Pavec J, Prevot G, et al. *Eur Respir J.* 2010 Jan;35(1):105-111.
3. Waxman A, Restrepo-Jaramillo R, Thenappan T, et al. *N Engl J Med.* 2021;384(4):325-334.
4. TYVASO [package insert]. Research Triangle Park, NC: United Therapeutics Corporation; 2021.